

current 106 which flows to the bottom of the aeration chamber which creates main currents 108, 110, and 112 that sweep across the bottom in all directions. The water sweeping generally in a straight line across the bottom of the vessel in direction 108 moves with the greatest speed and serves to move any solid falling out of the clarifier chamber back into circulation in the aeration chamber, thus preventing any accumulation of solids in the bottom of the aeration chamber. The water moving generally around the outer perimeter of the vessel in directions 110 and 112 moves at a slower speed but with enough speed to scour the edges of the vessel and to sweep the solids into circulation. All areas of the bottom of the vessel are forced into circulation. Those areas intermediate between the path straight across the bottom of the vessel and the path around the outer perimeter travel respectively intermediate speeds. While FIG. 1 shows the entire circulation pattern, FIG. 5-7 show different views of parts of this pattern. As depicted in Figs. 1 and 6, the injection system generates an area of aerating bubbles adjacent the intersection of the side wall and the bottom wall that induces the current flow shown in Figs. 1 and 6. Thus, assuming that direction 100 in Fig. 1 depicts the current flow of the wastewater induced at an injection area adjacent the intersection of the side wall and the bottom wall of the aeration chamber, a branched current having runs indicated by 102 and 104 is

produced. Accordingly, multiple diffuses could be positioned in sufficient proximity to one another such that the current or circulation pattern depicted in Fig. 5 is achieved.